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ABSTRACT

Kindergarten teachers' directives uttered during the first month of school were compared with those uttered three months later. It was expected that changes associated with different classroom organizational structures, with increasing child sophistication, and with size of group being addressed, would influence the type and clarity of teacher directive. Two one-hour observations were held in each of three kindergarten classrooms in September and again in December. Teacher directives became fewer in number and less direct, but remained clear. Structured lessons increased as did directives to small groups. Directives varied in systematic ways. (Author)

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INFLUENCE OF ADDRESSEE AND ACTIVITY ON KINDERGARTEN TEACHERS' DIRECTIVES

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I INTRODUCTION

Directives are speech acts in which the speaker's intention is to get the hearer to do something (Searle, 1976). Directives can have varying properties of directness which involves the degree of matching between the propositional content of the utterance and its intentional meaning (illocutionary force). A fairly close match yields a direct directive such as "Shut the door Fred", while a mismatch yields an indirect directive, "There's a draft in here". Even indirect directives can be clear, however, if they specify the agent who is to perform the action and the action to be performed (Ervin-Tripp, 1976; 1977). "You left the door open, Fred" is relatively indirect in terms of a match between the content and the intentions of the speaker. Yet it is also relatively clear since the agent is mentioned and an action is at least alluded to.

Directives are interesting in their own right as psycholinguistic phenomena deserving of investigation, but, in addition, analysis of directives can provide much useful knowledge across several disciplines due to their frequency and ubiquitousness in all types of social interaction. During the past few years there has been increasing interest in directives by educational psychologists studying classroom interactions. Sinclair and Coulthard (1975) noted the existence of numerous teacher directives and described their importance as management devices in classrooms. Directives were seen as boundaries for sequences of classroom activities. Bruck (1978) studied directive control strategies of kindergarten teachers as they were used to prevent classroom disruptions. She found that teacher directive types were related to teacher perceptions of children as disruptive but not related to teacher perceptions of children's academic ability. Shapiro (1978a; 1978b) investigated classroom directive exchanges across all elementary grade levels and reported stable structural relations among teacher directives, child responses and teacher reactions. In these studies teacher directives varied as a function of grade level, but structural patterns remained consistent.

Most sociolinguistic study of directives has occurred outside of the school setting. A good deal of this work has been done by Ervin-Tripp (1976) and her associates. She described six types of directives: need statements, permission directives, imperatives, imbedded imperatives, question directives, and hints (see Appendix for descriptions of these categories). Ervin-Tripp (1976; 1977) also provided a useful distinction between clear and unclear directives. As discussed above these criteria involved the amount of propostional content actually included in the utterance.

Earlier application of these categories and criteria during classroom observations revealed that permission directives never occurred in 127 directives at any grade level and need statements occurred only once (Shapiro, 1978b). On the other hand Ervin-Tripp's category system had no classification for academic questions which occur quite frequently in classrooms. Academic questions can be considered directives in that they usually require some kind of overt response from the listener. Studies of early child language development suggest that academic questions may be intended to elicit an answering response and the fact of the child's responding may be more important than the content of the response (Brown, 1977; Holzman, 1972). Therefore, in adapting Ervin-Tripp's category system to classroom observations it was necessary to eliminate the categories of need statement and permission directives and to substitute the additional category of academic question. Two observation forms were developed using this system and observations were conducted at all grade levels.

During these early investigations it became apparent that the Kindergarten classroom would be a fruitful setting for learning about the development of teacher-pupil directive interactions. Kindergarten children must be assumed to be the most naive of all elementary school children with respect to their prior knowledge of formal school language and classroom norms. While exceptions to this assumption probably occur with varying background experiences of the entering Kindergarten

children, in general, children at this grade level are assumed to need more information in order to comprehend a teacher's directive. Furthermore, kindergarten teachers, if they are experienced, probably have some generalized knowledge and expectations regarding the capabilities of each group of new entrants, but it is through interacting with specific children that teachers develop perceptions about individual pupils which may influence those interactions. This construction of interactive patterns presumably occurs in kindergartens over a period of time, while at other grade levels stable interactive patterns may be established more quickly as a result, in part, of teachers'and pupils prior stores of "shared intersubjectivity". On the basis of these assumptions a longitudinal, observational study was initiated in three kindergarten classrooms. Only a portion of the findings will be reported here

The purpose of this analysis was to compare kindergarten teachers' directives uttered during the first month of school with those uttered three months later. It was expected that teachers would vary their directives according to the length of time the children had been in school, according to the size of the group being addressed (whether the whole class, only a small group, or an individual boy or girl), according to the sex of the addressee, and also according to the type of activity underway when the directive was uttered. In particular, it was expected that certain changes associated with the increasing abilities of children (or at least with teachers' perceptions that children's abilities were increasing) and increasing expectations of teachers would precipitate significant changes in the types of directives spoken by kindergarten teachers and in the clarity of those directives.

II METHOD

Sample

Three kindergarten classes, their children and their teachers constituted the sample for this study. The classes were the entire kindergarten enrollment in one small-city school in Southern New York State. The school draws from a

population that is one-third middle class, one-third lower middle class, and one-third lower class. White, black, Hispanic and Oriental children are enrolled in kindergarten. The classes have 19, 20, and 26 pupils respectively.

Methods and Procedures

Two one-hour observations were conducted in each of the classes during September and then again during December. Observation times were matched for maximum comparability. Two observation instruments were used, a tally form and a response form (see Appendix). The present analysis focuses exclusively on the tally form and on two items from the response form: type of addressee and type of activity.

Two trained observers coded either the tally form or the response form for 30 minutes then switched to the other form. Order of observer-form pairings was counterbalanced. Observers were trained following a procedure outlined in Frick and Semmel (1978) utilizing videotaped examples of target behavioral categories. Interobserver agreement was computed following videotape training then again following practice observations and once more following the first data collection. Agreement was assessed by a two-stage method. First a correlation coefficient was computed between the proportions of entries in all categories coded by Observer #1 and Observer #2. Then the differences between each pair of proportions was computed. Increasing correlations and decreasing differences in proportions were taken as evidence for increasing agreement between observers (see Table 1). The average difference in proportions for directive types was 7.32% ranging from a high of 16.4% during an early training session to a low of 3% during the first data collection. Correlations for types averaged .898 with a range of .73 to .99. Similarly differences in proportions for clarity levels averaged 9.98% with mean correlations of .878 between pairs of those proportions. No differences were found between observers in coding type of addressee and type of activity. These were apparently low-inference categories.

ole 1 - Interobserver Correlations and Differences in Proportions Categorized as to Type and Clarity Level by Pairs of Observers from the First Training Session to the First Classroom Observation

Training Period	Mean Difference for Types*	Correlations for Types	Mean Differences for Clarity Level*	Correlations for Clarity
#1	2.2	.98	15.0	.78
#2	16.4	.73	7.0	.95
#3	10.0	.86	17.7	.68
#4	5.0	.93	4.7	.99
First in-class observation	3.0	.99	5.5	.99
	Mean =7.32	.898	9.98	.878

*Entries represent differences in proportions of each category type coded by pairs of observers.

Table 2 --Chi-square Analysis of the Association Between Time of Observation and Proportions of Each Directive Type Observed in All Kindergarten Classes.

Directive Types	September	December	Sum
Academic Questions	Sum=369 Mean=61.5	Sum=156 Mean=26	525
Imperatives	Sum=363 Mean=60.5	Sum=290 Mean=48.3	653
Imbedded Imperatives	Sum=236 Mean=39.3	Sum=259 Mean=43.2	495
Question Directives	Sum=89 Mean=14.8	Sum=99 Mean=16.5	188
Hints	Sum=169 Mean=28.2	Sum=212 Mean=35.3	381
Sum	1226	1016	2242

Chi-square with 4 degrees of freedom=201.78, p/ .001

Stability of the instruments was assessed by computing the correlations between pairs of observations in each classroom. The average of these correlations was .72, including correlations between observations taken three months apart as well as those taken one week apart. These latter ranger from .91 to .99.

The procedure for the tally form involved the observer making an on-the-spot decision as to the type of directive uttered and its clarity level. A tally mark was then made in the appropriate cell. Five types of directives were coded: academic questions, imperatives, imbedded imperatives, question directives and hints (see Appendix as well as previous discussion). Clarity levels included clear, middle clarity, and unclear corresponding to criteria discussed by Ervin-Tripp (1977) and involving the presence or absence of the agent and/or action in the utterance. While the coding of each directive was subjective, the high degree of interobserver agreement for proportions of each directive type and clarity level within one observation period, provides evidence for confidence in these codings.

Observers were instructed to tally every directive uttered during the observation period. It is assumed that it is not possible to actually do so since directives are among the most frequent teacher utterances and since many directives are uttered as part of a long string of teacher speech. Nevertheless there has been substantial agreement among observers as to the absolute number of directives tallied during each observation period. This agreement has averaged .75 as assessed by means of a simple proportion of the smaller number of codings to the larger.

The response form was coded via an event sampling procedure as discussed by Medinnus (1976). Within a five-minute time limit an observer recorded the first occurring directive verbatim. The type of addressee and type of activity were then classified followed by other concomitants which will be discussed in future reports.

III RESULTS

Directive Types (see Figure 1)

At observation time #1 (September) the relatively direct directive types are seen to be the most numerous. Academic questions are used an average of 29% of the time and Imperatives are used an average of 30% of the time. The relatively less direct types, Imbedded Imperatives, Question Directives and Hints average 20%, 8%, and 17% of total teacher directives coded. At observation time #2 (December) the pattern has changed. There is a shift toward less direct types even though the proportion of Imperatives has scarcely changed. The shift is evident in a decrease in academic questions with a corresponding increase in Imbedded Imperatives and Hints. Question Directives, the least frequent directive type remains of low proportions.

The shift from relatively direct directives to more subtle, more polite and less direct forms is made more graphic by a chi-square test of the interaction between time of observation and directive type with a highly significant association between the two (chi-square, with 4 df = 201.78, $p < .001$) (see Table 2).

Clarity Level (see Figure 2)

The data for directive clarity differ from those for directive type in that they are noticeably more consistent. The mean proportions for each level of clarity are all quite similar from class to class and from Time 1 to Time 2 within classes. These proportions average .74 for clear directives, .24 for middle clarity directives, and .02 for unclear directives. The static nature of the relative proportions of directive clarity levels were not as expected and lead to the conclusion that while kindergarten teachers employ more polite, subtle and indirect directive utterances well into the school year than they do at the beginning of the school year, these directives remain clear in terms of the presence of agent and/or action.

Number of Directives

The absolute number of directives uttered by kindergarten teachers decreased by 17% from Time#1 to Time #2, from 1226 to 1016 in six hours of observations each time.

Figure 1 - Comparison of proportions of teacher directive types uttered at Time #1 (September) and Time #2 (December).

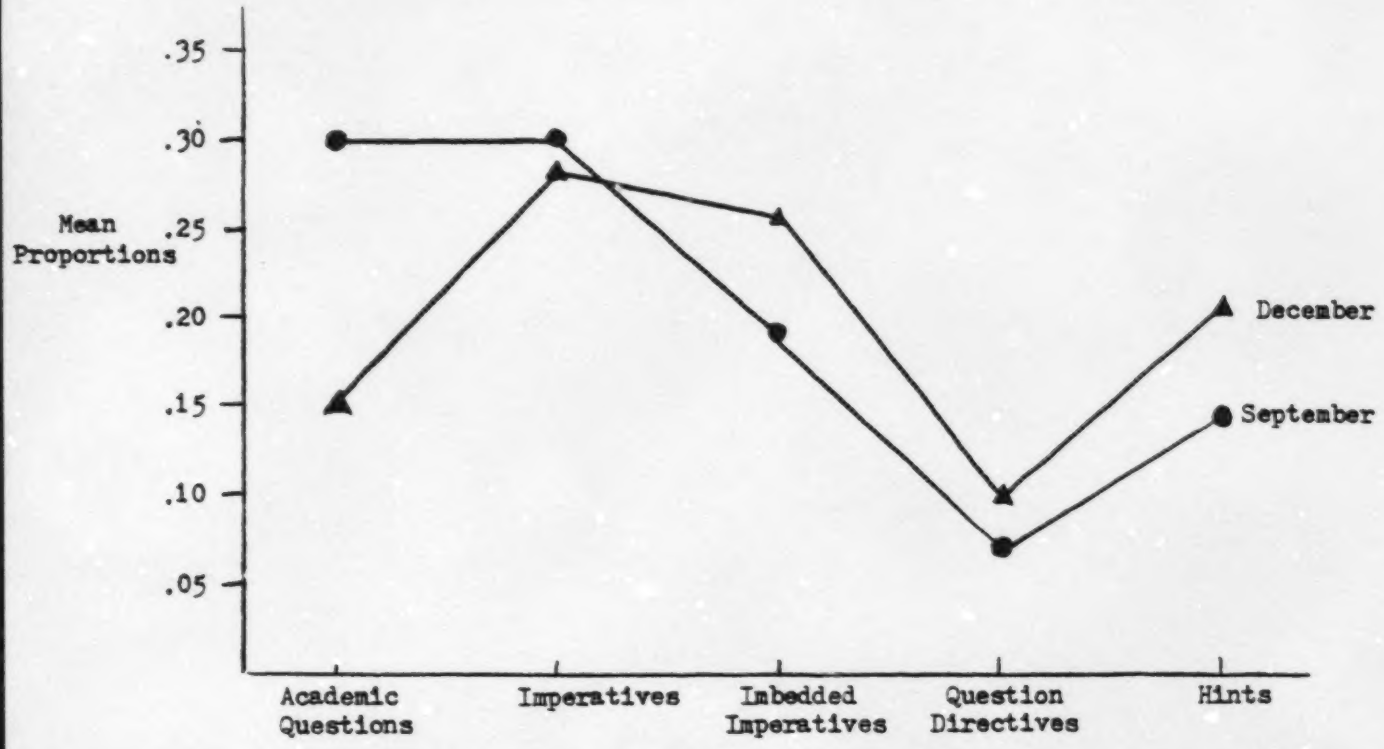
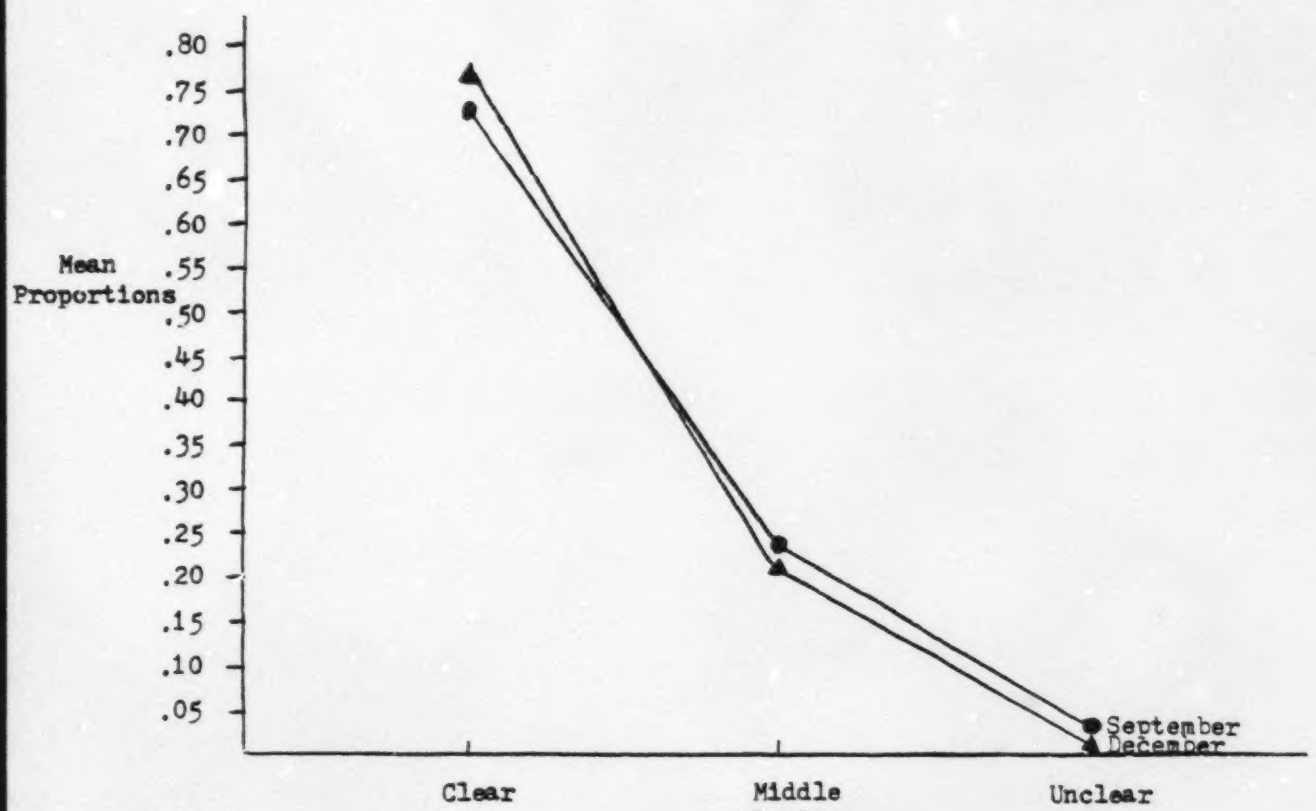


Figure 2 - Comparison of proportions of teacher directive clarity levels at Time #1 and Time #2.



Type Of Addressee

Four types of addressee were coded: large group, small group (defined as less than half of the children present in the room), boy (or boys) and girl (or girls). The proportions of directives addressed to each of these categories of hearers remained relatively equivalent from Time 1 to Time 2, however the pattern of these proportions changed measureably. There was a significant increase in directives addressed to small groups (6.7% vs. 11.7%, $F(1,16)= 8.02$, $p< .05$) and a significant difference between directives addressed to boys vs. girls (21.09% vs. 25.79%, $F(1,16)= 4.61$, $p< .05$). At both times the highest frequency of directive addressee is large groups. (see Table 3)

Type of Activity

Four types of activities were coded as occurring simultaneously with coded directives. Unstructured activities included playtime, snack time, and transitions between other activities. Structured lessons included teacher-led discussions, storytime, reading and math readiness activities, science and social studies lessons. Art and music were considered as separate activities having some structured and some unstructured elements.

There were substantial differences in type of activity from Time 1 to Time 2. Unstructured activities declined from 18.07% to 11.9% ($F(1,16)=12.36$, $p<.001$), art and music together declined from 18.42% to 3.39% ($F(1,16)=20.87$, $p<.001$) and structured lessons increased from 45.1% to 81.3% ($F(1,16)=28.26$, $p<.001$). (see Table 3)

IV DISCUSSION

It appears that kindergarten teacher directives , for this sample, change as a function of time and classroom activity. Teachers use more direct forms during the first month of school when there is more art, music and unstructured activity. The majority of their directives are addressed to the whole class but in their directives aimed at individual children, girls seem to outnumber

Table 3 - Analysis of variance via regression on dummy variables representing specific contrasts (all contrasts with 1 and 16 degrees of freedom).

Contrast	Mean Proportions Coded in These Categories	F value	p /
Sex:		4.61*	.05
Boys vs.	.211		
Girls	.258		
Small Group:		8.02*	.05
Time 1 vs.	.067		
Time 2	.117		
Art plus Music:		20.87**	.01
Time 1 vs.	.184		
Time 2	.034		
Unstructured Activities:		12.36**	.01
Time 1 vs.	.181		
Time 2	.119		
Structured Lessons:		28.26**	.01
Time 1 vs.	.451		
Time 2	.813		

boys. Teachers also use more directives at the beginning of the school year.

By about fourteen weeks into the school year kindergarten teachers are beginning to use fewer direct forms and more subtle, polite and indirect forms such as imbedded imperatives, question directives and hints. Teachers use fewer directives in general later in the school year but at both times teachers make an effort to be clear in specifying both the intended agent and the action to be performed. When not being completely clear, kindergarten teachers at least include either the agent or the action in most directive utterances. Unclear directives specifying neither the agent nor the action are quite rare for this sample, at least for the first half of the school year.

By December teachers are addressing significantly more directives to small groups of children and while some unstructured activities remain, art and music have dwindled to negligible proportions while the proportion of structured lessons has soared.

Some speculations are called for as a result of this analysis. It appears that teacher directives are not random occurrences but vary in systematic ways. This variation could be influenced both by child behaviors and by teacher expectations. The fact that teachers use more direct directives at the beginning of the school year may reflect the teacher's expectation that new entrants are not prepared to comprehend more subtle forms. Or this finding may be associated with the additional finding that unstructured and semi-structured activities make up a good deal of the kindergarten schedule at the beginning of the year. Unstructured activities having less internal organization may need external structure provided by direct imperatives and academic questions. Teachers may also believe that kindergarten children need more directives at the beginning of the year than they do later on. This could be a generalized expectation on the part of kindergarten teachers; or the decrease in directives from September to December may reflect an increase in shared knowledge between teachers and pupils requiring fewer spoken directives to accomplish the same actions.

Both the increase in indirect forms and the overall decrease in all types of directives may be the result of the shift from less to more structured activities. Structured school activities which are rule-bound probably require fewer direct directives and fewer directives overall, once the rules are known by all parties. The reduction in direct forms and accompanying increase in indirect forms may result from teacher recognition of increasing sophistication in child responses. This seems the most plausible explanation for a decrease in academic questions associated with an increase in structured lessons. It would be expected that academic questions should be more numerous as structured lessons increase. However, imbedded imperatives (Would you show us how to make a capital B, Betty Anne?), question directives (Can you make a capital B, Betty Anne?) and hints (Now it's Betty Anne's turn to make a capital B) are also useful for eliciting academic responses while making the request or command more subtle and polite (Ervin-Tripp, 1976). Note too that all these examples remain quite clear in indicating both the intended agent and the action to be performed.

The significant difference in sex of teacher directive recipients is not consistent with previous research which suggests that teachers verbally attend more to boys and control boys behavior more (Fagot, 1978). In addition, Bruck (1978) found that sex of student had no affect on teacher directive control strategies. These inconsistent findings are typical of sex differences research (Maccoby, 1972). For the present study the source of the significant sex difference in favor of girls appears to be located in one classroom where the teacher consistently addressed substantially more directives to girls than to boys. While the class enrollment reveals that more than half of the pupils were girls, more than half of the individually addressed directives across all three classes for twelve hours of observation were addressed to girls. It would appear then that the influence of student's sex on teacher directives must remain conjectural pending further clarification.

In general the most notable findings of this analysis support the view that there are systematic, non-random aspects to the use of directives by kindergarten

teachers. It is suggested here that prior knowledge of child capabilities, differing classroom organizational structures, and teacher beliefs and expectations all influence directive choice by kindergarten teachers. These data are consistent with earlier findings that stable interactional patterns exist among teacher directives and child responses (Shapiro, 1978a). Additional research is needed which will deal with the set of beliefs and expectations of both teachers and pupils which influence such stable interactional systems. For example, what is the nature of the prior knowledge which results in teacher selection of varying directive types and clarity levels? One logical speculation suggests that teacher prior beliefs are made up of a network of generalized knowledge about children at their grade level combined with specific pieces of information about groups of children or individuals. With this hypothesis in mind, Bruck (1978) looked for an association between teachers' prior perceptions about children's academic ability and those teachers' directive control strategies. No such association was found but there was a close association between directive type and incidences of child disruptions. In this case immediate child behaviors were more powerful elicitors of teacher behaviors than were classroom structures or teachers' cognitive biases. It seems that much yet needs to be done in sorting out the relationships among teacher and child behaviors which are manifested in classroom language. The present study is an attempt to clarify a few of these issues.

APPENDIX

Explanations for Ervin-Tripp's category system of Directive Types and Clarity Levels.....p.15

Specimen Tally Form.....p.16

Specimen Response Form.....p.17

References.....p.18

DIRECTIVE TYPES

(Adapted from Ervin-Tripp, 1976;1977, and revised for use in homes and schools.)

	Examples
Imperatives: Direct commands	Sit down! Do it now. Mary, give me the pencil.
Imbedded Imperatives: A command or request are explicitly mentioned in the utterance but the imperative is imbedded in several other grammatical forms and may often be accompanied by preposed or postposed "please." Modal verbs often appear in these forms.	Won't you sit down? Please do it now. Mary, would you mind giving me that pencil?
Question Directives: These sound like requests for information rather than requests for action.	Can you sit over there? Who can do this for me? Do you have an extra pencil, Mary?
Hints: These are most often declaratives which require inference.	Here's a seat. I'm waiting for this to get done. I need a pencil.*
Academic Questions: Requesting a specific piece of information in order to test the hearer's knowledge, not because the speaker needs the information.	Why did Goldilocks get into trouble? What do we call a baby cat? What's this? (pointing)

CLARITY LEVELS

(According to criteria suggested by Ervin-Tripp, 1977; Bruck, 1978; and others.)

Clear: Specifically mentions the agent who is expected to perform the action and the action to be performed; or clearly indicates these by gesture, glance, intonation, facial expression or well-established precedent.	Mary, would you mind giving me that pencil? Can you sit over there?
Middle Clarity: Either the agent or action is omitted and not replaced by precedent or paralinguistic features.	That door should be closed. Mary, is this your pencil
Unclear: Neither the agent nor action is mentioned nor are they indicated by any other means of communication.	I'm waiting! I need a pencil. Whose boots are these?

*Ervin-Tripp (1977) includes a category for need statements, however, in previous research in classrooms these forms were all but non-existant and could also be considered hints. For the present study any such utterances will be classified as hints.

DIRECTIVES STUDY TALLY FORM

Class: A B C D · Week: 1 2 3 4 Hour: 1 2

TYPE	LEVEL OF CLARITY			
	CLEAR	MIDDLE	UNCLEAR	TOTALS
ACADEMIC QUESTION				
IMPERATIVE				
EMBEDDED IMPERATIVE				
QUESTION DIRECTIVE				
HINT				
TOTALS				

Class: A B C D Week: 1 2 3 4 Lg. group ☐ Sm. group ☐

Type of Activity: Hour: 1 2 Addressee: Boy(s) ☐ Girl(s) ☐

Directive:

Type:

Imp.	Imb.Imp.	Que.Dir.	Hint	Ac.Que.

Clarity Level:

Unclear	Middle	Clear

Child Response:

Complies Immediate

Correct	
Incorrect	

Complies Delayed

Correct	
Incorrect	
Asks	
Tries Behavior/ Seeks Feedback	

Does Not Comply ☐

Teacher Reaction:

No reaction	
Repeats	
Rephrases	
Physical	
Answers	
Approves	
Disapproves	

Rephrased Directive:

Contextual Features:

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